

SATELLITE-BASED PROGRAMMABLE ALLOCATION OF BANDWIDTH FOR FORWARD AND RETURN LINKS

ABSTRACT OF THE DISCLOSURE

[0075] A satellite includes a programmable facility including circuitry responsive to programmable control information. One or more filter parameters, or other forms of instructions for allocating channel capacity (i.e. bits/second/Hz), are received at the satellite in orbit to direct the programmable facility to separate particular sub-signals from an input signal. In one embodiment, the programmable facility can be programmed to change the allocation of channel capacity dedicated to the forward and return links based on the ratio forward and return traffic through a satellite. Changing the allocation of channel capacity may be achieved by changing the portions of the total allocated frequency bandwidth that are used for forward and return links. Alternatively, the changes may be made to the forward and/or return data rates, either alone or in combination with frequency bandwidth allocations.